

OKLAHOMA MONTHLY CLIMATE SUMMARY

FEBRUARY 2001

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Oklahoma Climatological Survey

MONTHLY SUMMARY FOR FEBRUARY 2001

February 2001

*Statewide average temperature = 41.0° F
Statewide average rainfall = 4.01 inches*

February 2001 was wet. Four major winter storms, each featuring various mixtures of frozen, freezing, or liquid precipitation crossed the state. Preliminary data from the National Weather Service provide a statewide-averaged precipitation of 4.01 inches, 2.28 inches greater than normal and the 4th greatest February precipitation since such record keeping began in 1892. Winter 2000/01 (December through February) was the 6th wettest winter recorded (beginning with the 1892/93 season) with a total statewide-averaged precipitation of 8.22 inches, 3.52 inches greater than normal. Precipitation through the first two months of the current year totaled 6.27 inches, averaged statewide, exceeding normal by 3.28 inches and ranking 5th greatest among January-February precipitation totals.

That the statewide-averaged temperature in February (41.0 degrees, 0.3 degrees less than normal, 44th lowest of 110 years) was close to normal did not allay the fact that this has been a cold winter. From the first of November through the end of February, the statewide-averaged temperature was 37.5 degrees, 4.2 degrees less than normal, to rank this as the 5th coldest such period in the state's annals. Temperatures through the three-month "climatological winter" averaged 35.6 degrees, 3.4 degrees less than normal, ranking this as the 8th coldest such period. The year 2001 is off to a "slightly cooler than normal" beginning with a 35.6 degree average temperature (0.6 degrees less than normal, 30th lowest such temperature on record) through its first two months.

February Normals

*Statewide average temperature = 41.3° F
Statewide average rainfall = 1.73 inches*

Melting of snow left over from January consumed February's first seven days, a moderating trend that ended with the arrival of a winter storm that crossed the state on the 8th and 9th. Thunderstorms in advance of the associated cold front produced strong winds, but spotty rainfall. Mesonet stations near Medicine Park (Comanche County) and Grandfield (Tillman) each reported peak winds of 68 miles per hour on the evening of the 8th. Early morning on the 9th saw gusts of 64 miles per hour at the Ketchum Ranch site near Velma (Stephens) and 61 miles per hour near Walters (Cotton). Wind damage was reported in or near Rush Springs (Grady), Lone Grove (Carter), Maud (Pottawatomie), Kingston (Marshall), and Calera (Bryan). A man was killed when boat docks and other structures were badly damaged by strong winds that raked a marina at Catfish Bay on Lake Texoma. Behind the front, Kenton (Cimarron) reported 8 inches of snow. Four inches of snow fell at Boise City (Cimarron) and Turpin (Beaver). Various forms of winter precipitation were reported elsewhere in the state.

(Continued on page 3.)

Rain, sleet, and snow all found their way into the weather picture from the 13th through the 17th. Freezing rain and drizzle plagued many areas with a coat of ice, but heavy rain falling on saturated ground produced flooding in several areas. Flash flooding was reported near Davis (Murray). Flooding was reported in McCurtain and LeFlore counties, particularly along the Little and Poteau rivers, and their tributaries. Three inches of rain were commonplace throughout the southeast. Hochatown (McCurtain) accumulated 8.86 inches of rain during the five-day period. Other reports from McCurtain County included: 7.68 inches just north of Broken Bow, 7.49 inches at Carnasaw Tower, 6.45 inches at Carter Tower, 6.44 inches at Idabel, 6.00 inches at Valiant, 5.82 inches at Smithville, and 5.50 inches at Battiest. Heavener and Page in LeFlore County reported 5.93 and 4.91 inches of rain, respectively.

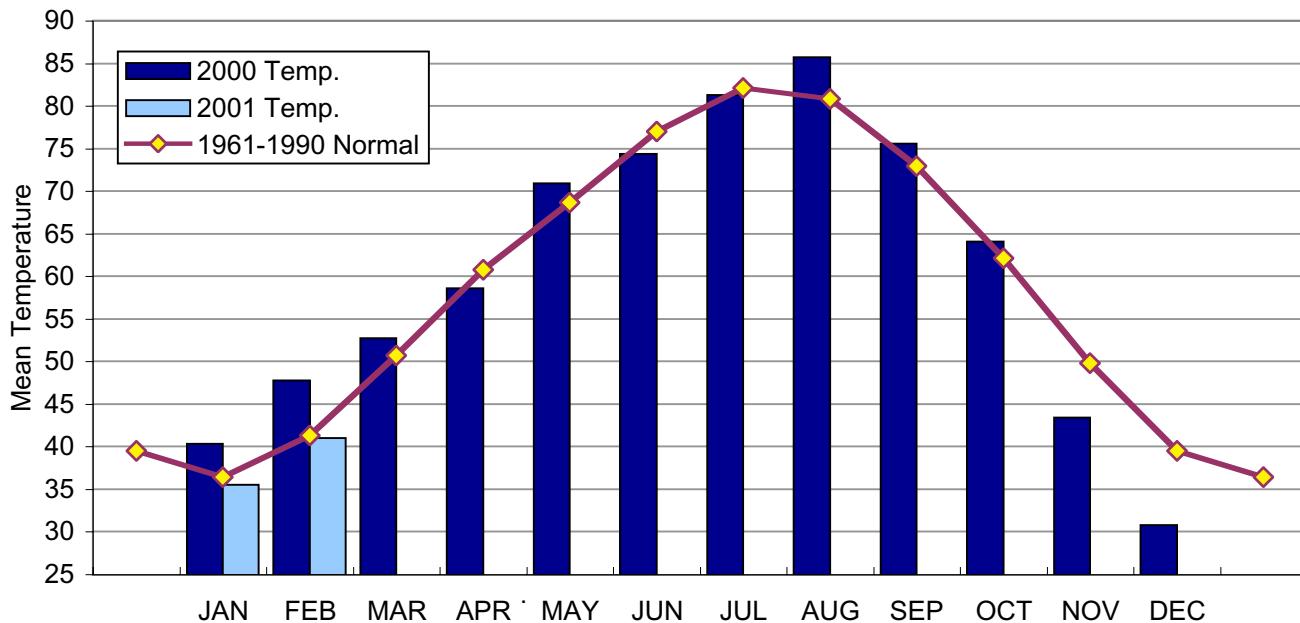
More heavy rain, mostly in northeastern Oklahoma, was reported on the 23rd and 24th. Two-day precipitation totals included 4.45 inches at Upper Spavinaw State Park (Delaware), 4.01 inches at Pawhuska (Osage), 3.90 inches at Tahlequah (Cherokee), 3.88 inches at Checotah (McIntosh), 3.87 inches at Oktaha (Muscowee), and 3.83 inches at Webbers Falls (Muscowee). Peak winds reported with the storm system included 68 miles per hour at the Madill Mesonet site (Marshall) and 61 miles per hour at the Putnam site (Dewey). Thirty-six of the state's 115 Mesonet sites reported peak winds greater than 50 miles per hour.

February went out with one last winter storm. Kenton recorded 4 inches of snow on the 27th and 28th, a total accompanied by 3-inch reports elsewhere in the Panhandle. Haskell (Muscowee), Grady (Jefferson), and Tishomingo (Johnston) reported 2.97, 2.40, and 2.20 inches of rain, respectively, on the 28th. Sleet or freezing rain fell in many areas. Flooding was reported in Delaware County near Grand Lake and the Neosho River left its banks for a time near Commerce (Ottawa).

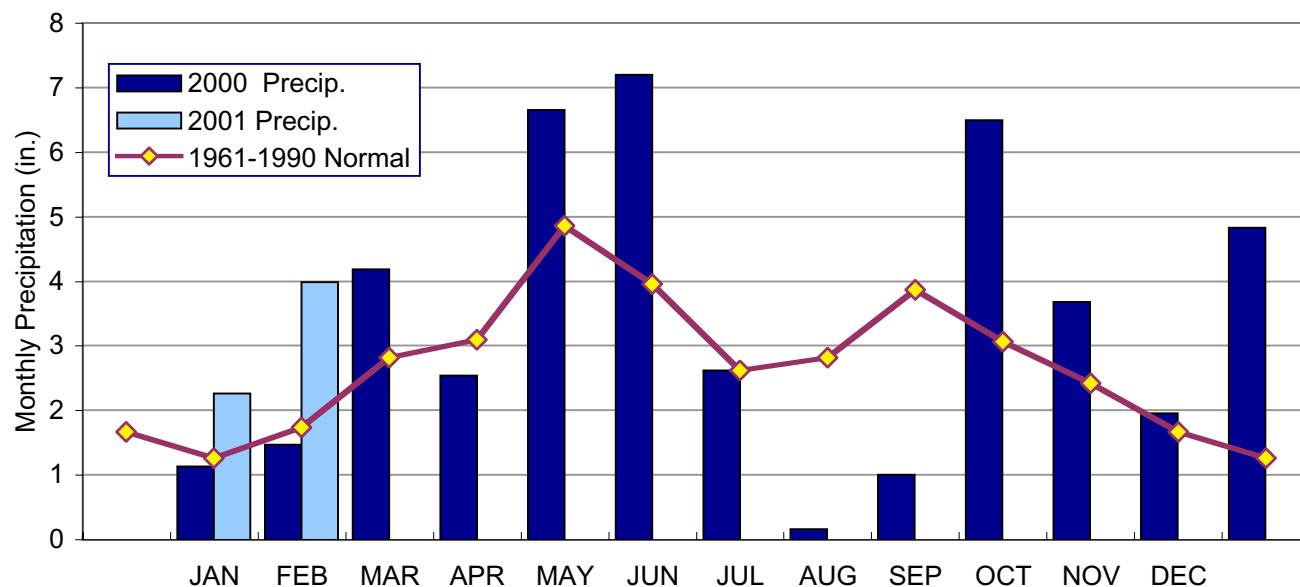
The state's lowest reported temperature during the month was 2 degrees at Fort Supply (Woodward) on the 9th. Single-digit daily minimum temperatures were commonplace in the state's far northwest on the 9th and 10th. On the other side of the coin, daily maximum temperatures in the 70s were reported on 10 days, led by 77 degrees recorded at the Hollis (Harmon) Mesonet site on the 19th. Daily maximum temperatures, statewide, were 61 degrees or more on the 19th. On the 7th, only the Kenton Mesonet site (59 degrees) recorded a daily maximum temperature lower than 61.

Howard L. Johnson
Associate State Climatologist

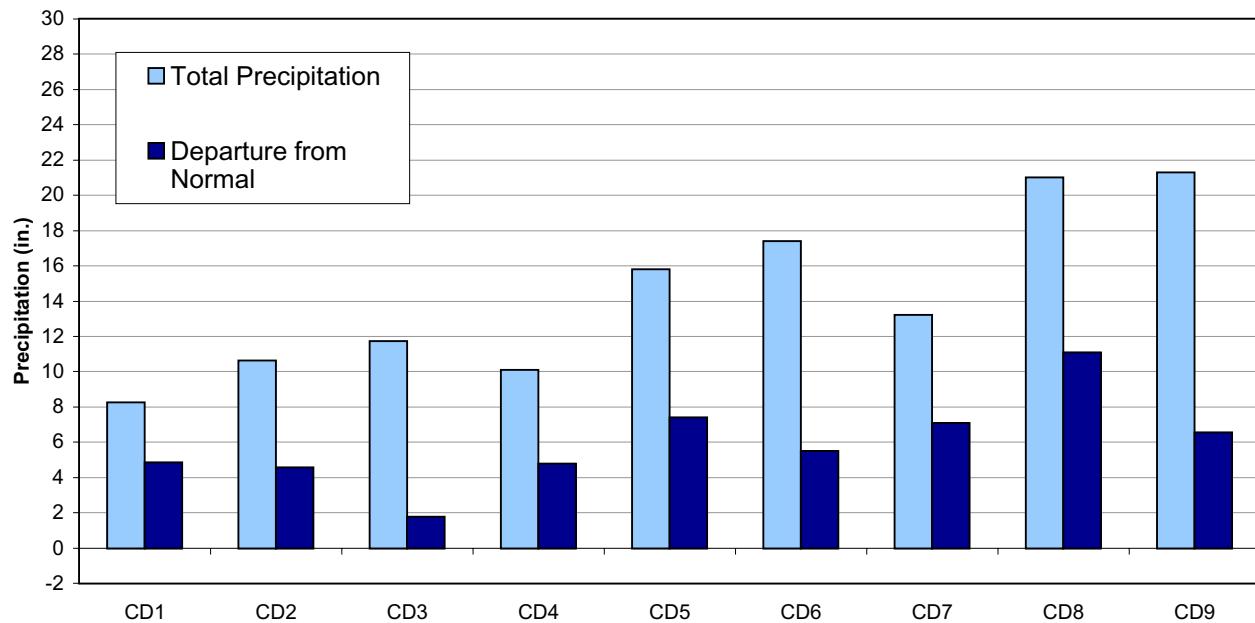
2000 AND 2001 STATEWIDE TEMPERATURES - MONTHLY AVERAGES



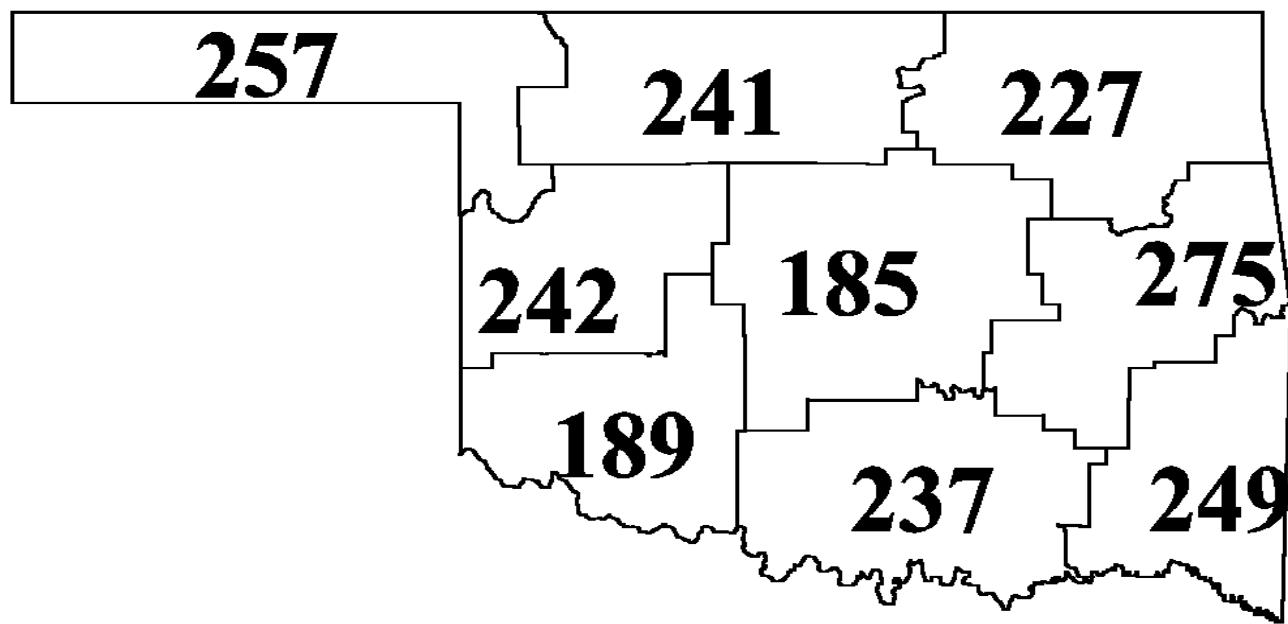
2000 AND 2001 STATEWIDE PRECIPITATION - MONTHLY TOTALS



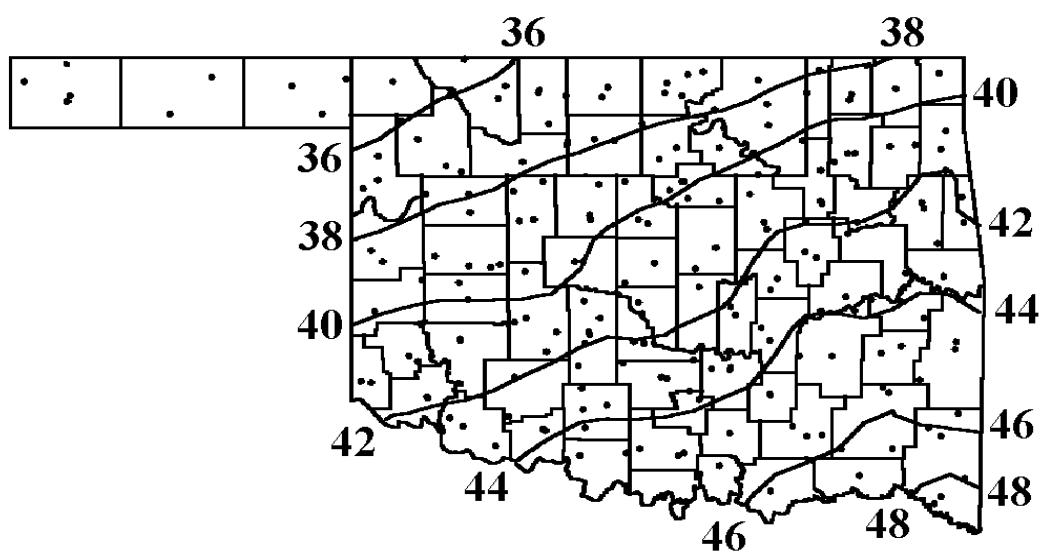
CLIMATE DIVISION AVERAGED PRECIPITATION - OCTOBER 2000 THROUGH FEBRUARY 2001



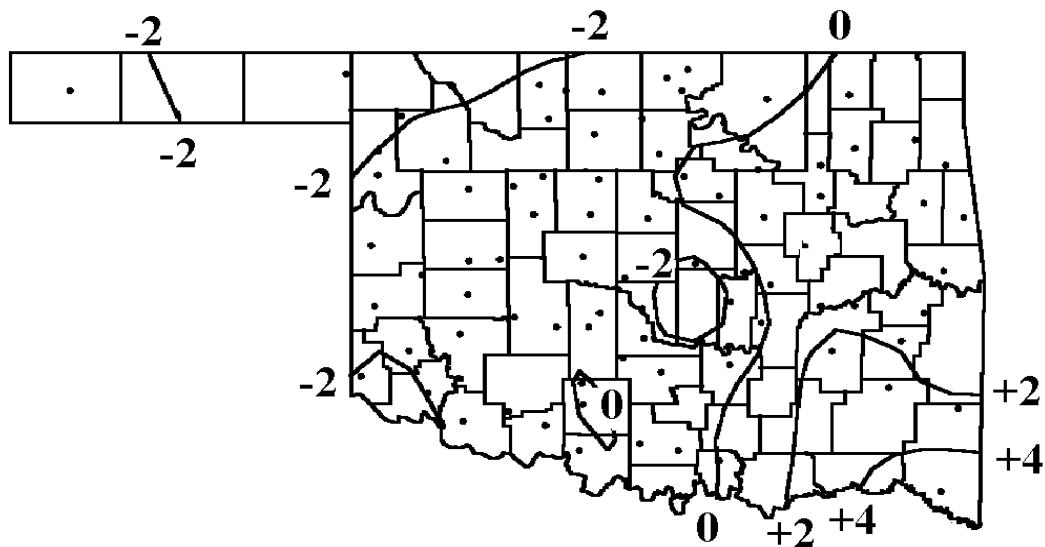
CLIMATE DIVISION PERCENT OF NORMAL PRECIPITATION - FEBRUARY 2001



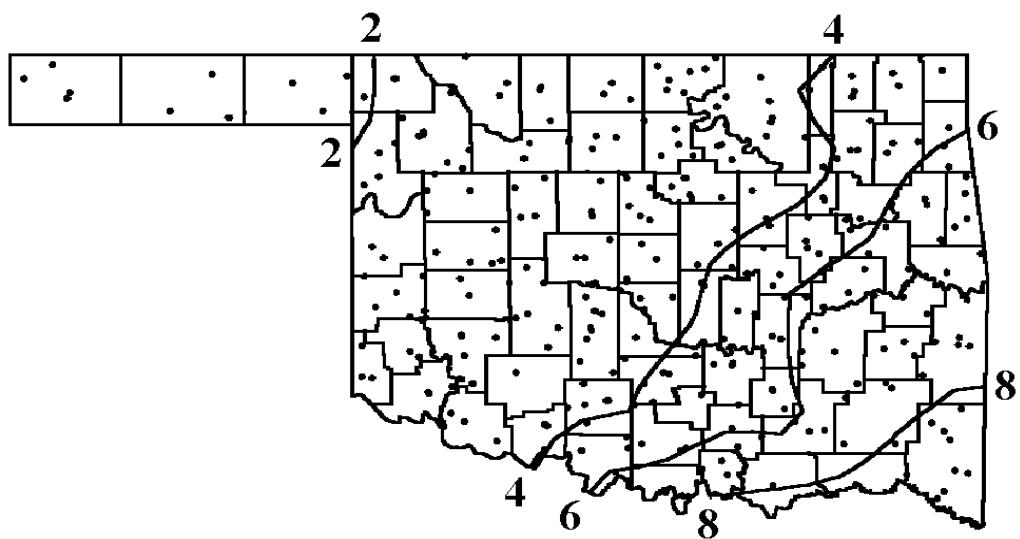
FEBRUARY 2001 AVERAGE MONTHLY TEMPERATURE (°F)



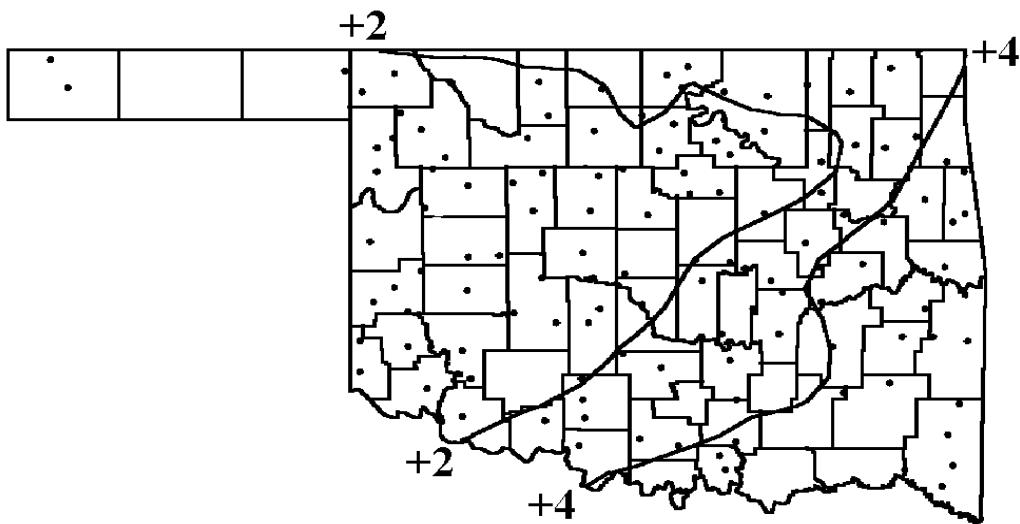
FEBRUARY 2001 DEPARTURE FROM NORMAL TEMPERATURE (°F)



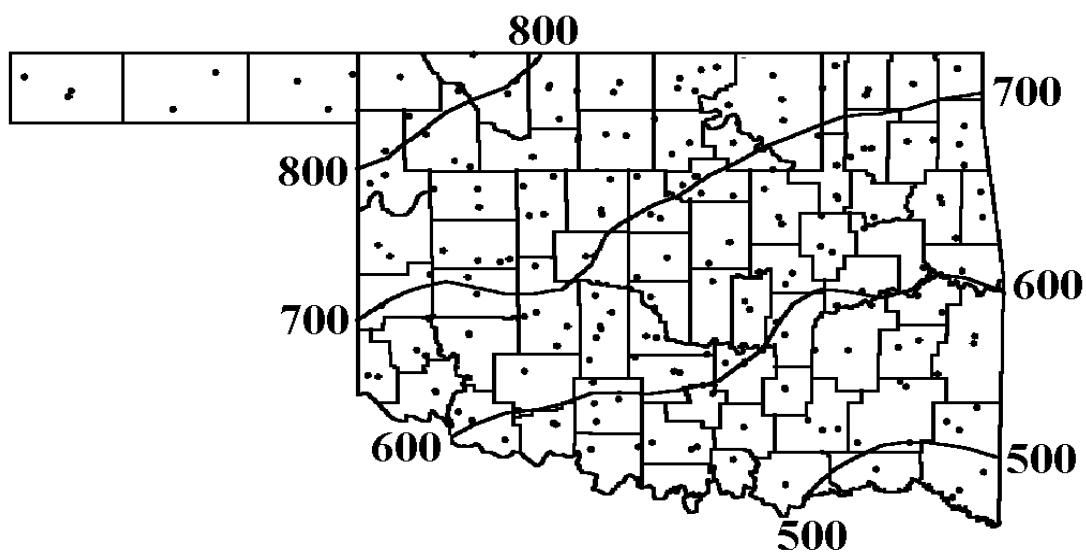
FEBRUARY 2001 TOTAL PRECIPITATION (INCHES)



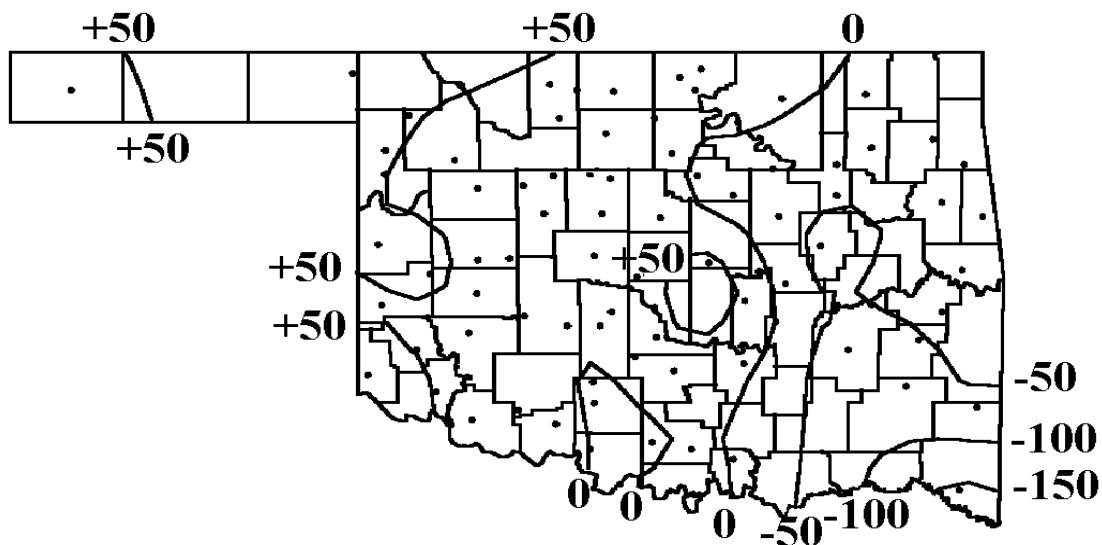
FEBRUARY 2001 DEPARTURE FROM NORMAL PRECIPITATION (INCHES)



FEBRUARY 2001 ACCUMULATED HEATING DEGREE DAYS (°F)



FEBRUARY 2001 DEPARTURE FROM NORMAL HEATING DEGREE DAYS (°F)



FEBRUARY 2001 SUMMARY FOR SOUTHEAST DIVISION (CD9)

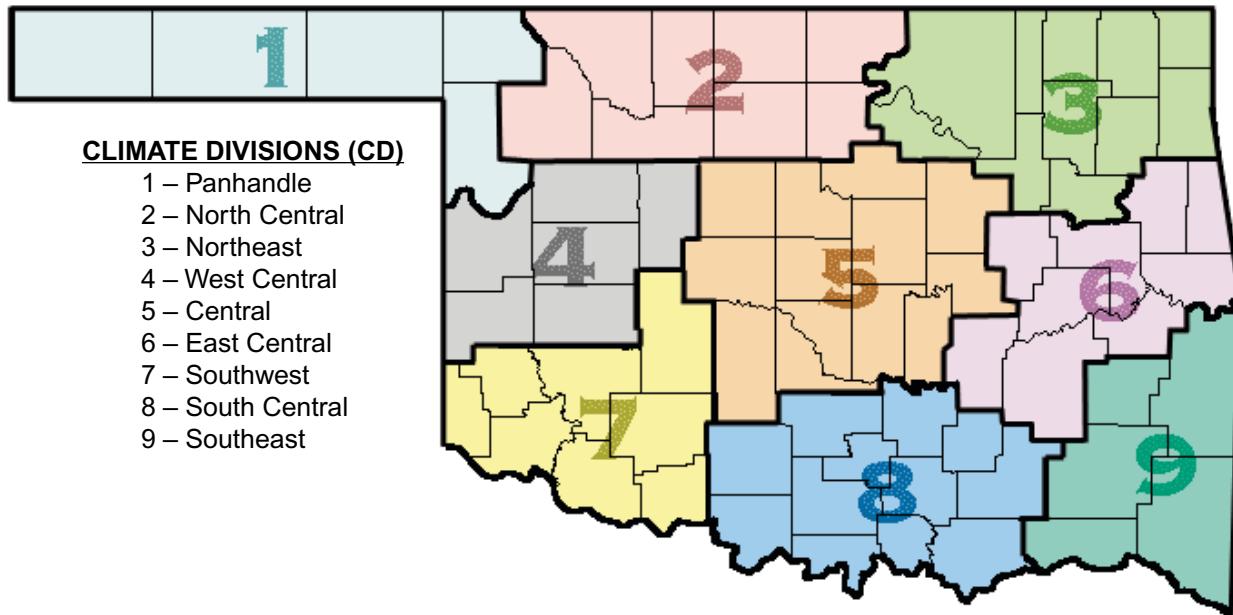
| NAME | ID | CD | MEAN | | NUM | DEV | | MAX | | MIN | | HEAT | | DEV | | COOL | | DEV | | DEV | | | |
|------------|------|----|-------|-----|-------|------|------|------|-----|-------|-------|-------|-------|-------|-------|-------|------|-------|-----|-------|-----|------|------|
| | | | TEMP | OBS | | FROM | NORM | TEMP | DAY | TEMP | DAY | DEG | FROM | NORM | DAY | DEG | FROM | NORM | TOT | NUM | PPT | OBS | FROM |
| BATTIEST | 567 | 9 | 44.3 | 27 | ***** | | | 69 | 25 | 17 | 2 | 560 | ***** | | 0 | ***** | | 7.312 | 28 | ***** | | 3.26 | 16 |
| BENGAL | 670 | 9 | ***** | 0 | ***** | | | **** | 0 | **** | 0 | ***** | ***** | | ***** | ***** | | 7.360 | 28 | ***** | | 2.62 | 16 |
| BROKEN BOW | 1162 | 9 | ***** | 0 | ***** | | | **** | 0 | **** | 0 | ***** | ***** | | ***** | ***** | | 9.590 | 28 | 6.09 | | 3.81 | 16 |
| CARNASAW | 1499 | 9 | ***** | 0 | ***** | | | **** | 0 | **** | 0 | ***** | ***** | | ***** | ***** | | 9.161 | 28 | 5.62 | | 3.69 | 16 |
| CARTER TWR | 1544 | 9 | ***** | 0 | ***** | | | **** | 0 | **** | 0 | ***** | ***** | | ***** | ***** | | 8.640 | 28 | 5.07 | | 3.45 | 16 |
| FANSHAWE | 3065 | 9 | ***** | 0 | ***** | | | **** | 0 | **** | 0 | ***** | ***** | | ***** | ***** | | 7.880 | 28 | 4.74 | | 1.54 | 15 |
| HEAVENER | 4008 | 9 | ***** | 0 | ***** | | | **** | 0 | **** | 0 | ***** | ***** | | ***** | ***** | | 7.030 | 28 | 4.09 | | 2.76 | 15 |
| IDABEL | 4451 | 9 | 51.2 | 28 | 6.8 | 76 | 26 | 28 | 11 | 388 | -190 | 0 | 0 | 9.081 | 28 | 5.55 | | 3.27 | | 17 | | | |
| PAGE | 6842 | 9 | 44.0 | 26 | ***** | 68 | 27 | 18 | 2 | 547 | ***** | 0 | ***** | 7.401 | 26 | ***** | | 3.31 | | 16 | | | |
| SMITHVILLE | 8285 | 9 | 44.4 | 28 | 1.5 | 67 | 28 | 15 | 1 | 578 | -42 | 0 | 0 | 8.440 | 28 | 4.80 | | 3.27 | | 16 | | | |
| SPIRO | 8416 | 9 | ***** | 0 | ***** | **** | 0 | *** | 0 | ***** | ***** | ***** | ***** | 7.790 | 28 | 4.91 | | 1.93 | | 16 | | | |
| TUSKAHOMA | 9023 | 9 | 47.0 | 28 | 2.1 | 71 | 26 | 18 | 2 | 505 | -59 | 0 | 0 | 7.612 | 28 | 4.67 | | 2.85 | | 16 | | | |
| VALLIANT | 9118 | 9 | ***** | 0 | ***** | **** | 0 | *** | 0 | ***** | ***** | ***** | ***** | 8.830 | 28 | 5.36 | | 3.30 | | 16 | | | |
| WILBURTON | 9634 | 9 | 45.2 | 28 | 2.0 | 70 | 20 | 19 | 1 | 556 | -54 | 1 | 1 | 7.680 | 28 | 4.65 | | 2.15 | | 15 | | | |
| WISTER | 9724 | 9 | 45.7 | 28 | ***** | 71 | 25 | 20 | 3 | 541 | ***** | 0 | ***** | 7.220 | 28 | ***** | | 2.55 | | 16 | | | |

FEBRUARY 2001 CLIMATE DIVISION SUMMARY

| NAME | CD | MEAN | | NUM | DEV | | MAX | | MIN | | HEAT | | DEV | | COOL | | DEV | | DEV | | | | |
|--------------------|----|------|-----|------|------|------|------|-----|------|-----|------|------|-------|-----|------|------|------|-----|-----|-----|-----|------|-----|
| | | TEMP | OBS | | FROM | NORM | TEMP | DAY | TEMP | DAY | DEG | FROM | NORM | DAY | DEG | FROM | NORM | TOT | NUM | PPT | OBS | FROM | MAX |
| CLIMATE DIVISION 1 | 1 | 35.7 | 4 | -2.2 | 72 | 20 | 3 | 11 | 820 | 61 | 0 | 0 | 1.950 | 9 | 1.19 | 2.00 | 28 | | | | | | |
| CLIMATE DIVISION 2 | 2 | 37.2 | 15 | -1.4 | 69 | 6 | 2 | 9 | 773 | 33 | 0 | 0 | 2.820 | 24 | 1.65 | 3.30 | 23 | | | | | | |
| CLIMATE DIVISION 3 | 3 | 40.9 | 11 | 1.2 | 75 | 21 | 10 | 2 | 672 | -37 | 0 | 0 | 4.150 | 20 | 2.32 | 3.65 | 24 | | | | | | |
| CLIMATE DIVISION 4 | 4 | 39.0 | 10 | -1.4 | 74 | 20 | 12 | 11 | 728 | 38 | 0 | 0 | 2.690 | 19 | 1.58 | 2.16 | 24 | | | | | | |
| CLIMATE DIVISION 5 | 5 | 41.0 | 16 | -0.7 | 71 | 27 | 10 | 11 | 667 | 16 | 0 | 0 | 3.120 | 31 | 1.38 | 2.85 | 15 | | | | | | |
| CLIMATE DIVISION 6 | 6 | 43.6 | 10 | 1.3 | 73 | 8 | 12 | 2 | 597 | -41 | 1 | 0 | 6.430 | 23 | 4.09 | 3.41 | 24 | | | | | | |
| CLIMATE DIVISION 7 | 7 | 41.5 | 10 | -1.3 | 77 | 19 | 17 | 10 | 653 | 32 | 0 | 0 | 2.380 | 19 | 1.12 | 2.41 | 24 | | | | | | |
| CLIMATE DIVISION 8 | 8 | 44.2 | 14 | 0.0 | 75 | 20 | 18 | 10 | 579 | -3 | 0 | -1 | 5.000 | 28 | 2.89 | 2.90 | 16 | | | | | | |
| CLIMATE DIVISION 9 | 9 | 46.3 | 6 | 2.4 | 76 | 26 | 15 | 1 | 521 | -71 | 0 | 0 | 8.120 | 14 | 4.83 | 3.81 | 16 | | | | | | |

Note: The above climate division summary contains similar information to the preceding tables but are the averages or extremes over all of the stations reporting in each climate division.

CLIMATE DIVISION MAP



EXPLANATION OF TABLES

The tables appearing on the preceding pages contain the following information for each station or climate division:

Station Name: The name of the observing site.

Station Identification Number: These numbers usually are assigned by the National Climatic Data Center.

Climate Division: See the figure above.

Number of Temperature Observations: These numbers are the actual number of temperature reports recorded at the station during the current month. Missing observations may result in artificially high or low mean monthly temperatures.

Deviation from Normal: The deviation of the observed mean monthly temperature from the monthly station normal. A positive value indicates the month was warmer than normal. A negative value indicates the month was cooler than normal. Normal monthly temperatures may be calculated by subtracting the deviation from the observed temperature.

Maximum Daily Temperature: The maximum daily maximum temperature observed during the current month and year and the day on which it occurred.

Minimum Daily Temperature: The minimum daily minimum temperature observed during the current month and year and the day on which it occurred.

Heating Degree Days: HDD are calculated each day of the month for which there is a temperature report and the average temperature for the day is less than 65 degrees. Daily values are summed to arrive at a monthly total. HDD are a qualitative measure of how much heat was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value. See the equation to the right for the HDD calculation.

Deviation from Normal Heating Degree Days: The difference between the actual HDD and the normal HDD for the month. A positive value indicates higher than normal heating requirements for the month as a whole. A negative value indicates lower than normal heating requirements for the month as a whole. Normal HDD may be calculated by subtracting the deviation from observed HDD.

Cooling Degree Days: CDD are calculated each day of the month for which there is a temperature report and the average temperature for the day exceeds 65 degrees. Daily values are summed to give a monthly total. CDD are a proxy measure of how much cooling was required to maintain a comfortable indoor temperature. Missing observations may result in an artificially high or low value. See the equation to the right for the CDD calculation.

Deviation from Normal Cooling Degree Days: The difference between the actual HDD and the normal HDD for the month. A positive value indicates higher than normal cooling requirements for the month as a whole. A negative value indicates lower than normal cooling requirements for the month as a whole. Normal cooling degree days may be found by subtracting the deviation from the observed cooling degree days.

Total Precipitation: Often incorrectly referred to as a mean precipitation, this value is the sum of all precipitation reported during the month at a station. If snow occurred, it is to be melted and its water equivalent recorded.

Number of Precipitation Observations: The number of days a rain or no rain observation was reported. Missing observations frequently result in artificially low total precipitation values.

Deviation from Normal Precipitation: The difference between the actual rainfall and the normal rainfall for the month. A positive value indicates more rain than normal was received. A negative value indicates less than was expected rainfall was received. Normal rainfall may be calculated by subtracting the deviation from the monthly total.

Maximum 24-Hour Report and Day: The maximum amount of precipitation recorded during the station's 24-hour observation period for the current month and year and the day on which it was recorded.

Heating Degree Days Calculation

NumDays

$$\sum_{i=1}^{NumDays} 65 - ((TMAX_i + TMIN_i) / 2)$$

Where NumDays = the number of days in the month of interest (e.g., NumDays = 31 for January)

Cooling Degree Days Calculation

NumDays

$$\sum_{i=1}^{NumDays} ((TMAX_i + TMIN_i) / 2) - 65$$

Where NumDays = the number of days in the month of interest (e.g., NumDays = 30 for June)

EXTREME VALUES OF TEMPERATURE AND PRECIPITATION IN EACH CLIMATE DIVISION FEBRUARY 2001

| CD | MAX TEMP | DATE | LOCATION | MIN TEMP | DATE | LOCATION | 24-HOUR PRECIP | DATE | LOCATION | MONTHLY PRECIP | LOCATION |
|----|----------------|----------------|----------------------------|----------|----------|---------------------|----------------|------|-------------|----------------|------------|
| 1 | 72 72 | 20 20 | ARNETT GAGE | 3 | 11 | GAGE | 2.00 | 28 | RANGE | 3.55 | BUFFALO |
| 2 | 69 | 6 | FREEDOM | 2 | 9 | FT SUPPLY | 3.30 | 23 | RED ROCK | 4.25 | RED ROCK |
| 3 | 75 | 21 | NOWATA | 10 | 2 | VINITA | 3.65 | 24 | UPPER SPAV | 7.12 | KANSAS |
| 4 | 74 | 20 | ERICK | 12 12 | 10 11 | REYDON REYDON | 2.16 | 24 | THOMAS | 4.26 | THOMAS |
| 5 | 71 | 27 | GUTHRIE | 10 | 11 | KINGFISHER | 2.85 | 15 | KONAWA | 5.59 | WEWOKA |
| 6 | 73 | 8 | MCCURTAIN | 12 | 2 | STILWELL | 3.41 | 24 | CHECOTAH | 8.53 | CHECOTAH |
| 7 | 77 | 19 | HOLLIS | 17 17 | 9 10 | FREDERICK HOLLIS | 2.41 | 24 | WICHITA MT | 4.28 | WALTERS |
| 8 | 75 75 75 | 20 21 20 | ARDMORE ATOKA DURANT | 18 18 | 9 10 | DURANT DURANT | 2.90 | 16 | MCGEE CREEK | 8.10 | MARIETTA |
| 9 | 76 | 26 | IDABEL | 15 | 1 | SMITHVILLE | 3.81 | 16 | BROKEN BOW | 9.59 | BROKEN BOW |

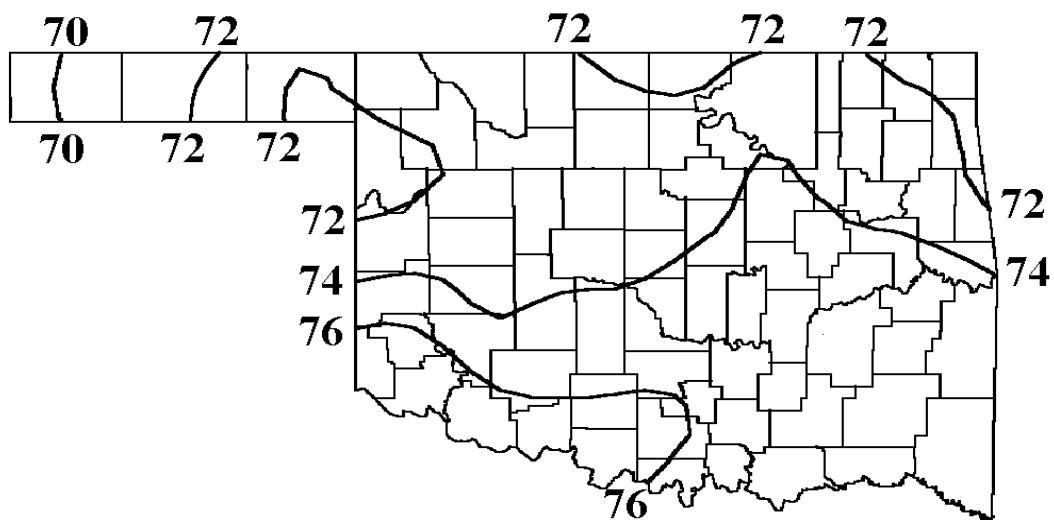
TABLE OF 2000/2001 COMPARISONS

| Station | FEBRUARY Temperature (°F) | | FEBRUARY Precipitation (in.) | |
|-------------------|------------------------------|------|---------------------------------|------|
| | 2000 | 2001 | 2000 | 2001 |
| Arnett | 42.6 | 35.5 | 0.87 | 2.17 |
| Enid | 44.6 | 37.7 | 1.88 | 2.82 |
| Tulsa | 48.1 | 41.3 | 1.34 | 2.62 |
| Elk City | 45.9 | 38.7 | 1.47 | 3.29 |
| Oklahoma City | 49.0 | 40.7 | 1.47 | 2.26 |
| McAlester | 52.1 | 46.3 | 1.14 | 7.29 |
| Altus Irr Station | 48.3 | 41.0 | 1.15 | 2.07 |
| Ardmore | 55.1 | 45.9 | 1.41 | 5.80 |
| Idabel | 55.5 | 51.2 | 4.00 | 9.08 |

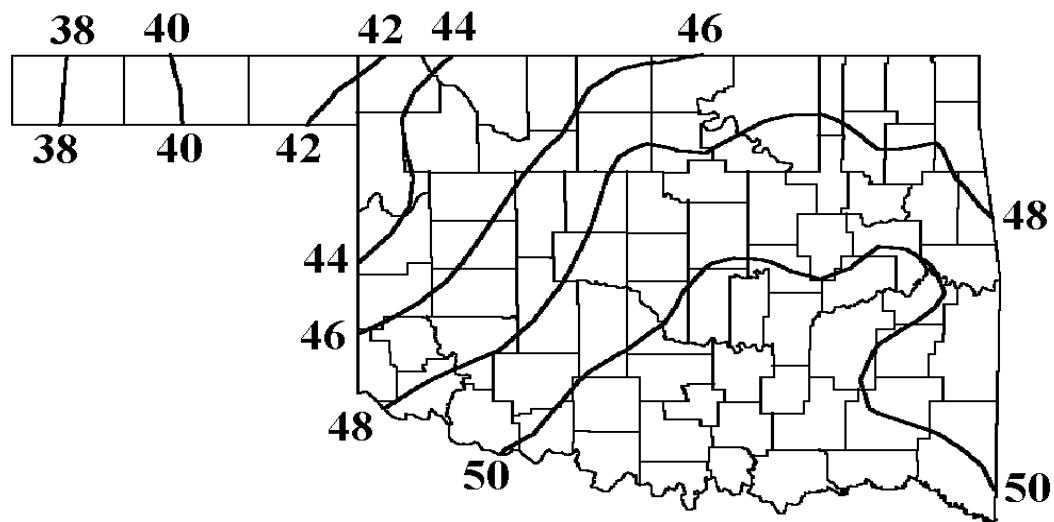
FEBRUARY 2001 STATEWIDE EXTREMES

| VARIABLE | STATION | DIVISION | OBSERVATION | DATE |
|-------------------------------------|------------|----------|-------------|------|
| Minimum temperature (°F) | Ft Supply | 2 | 2 | 9 |
| Maximum temperature (°F) | Hollis | 7 | 77 | 19 |
| Maximum 24-hour precipitation (in.) | Broken Bow | 9 | 3.81 | 16 |

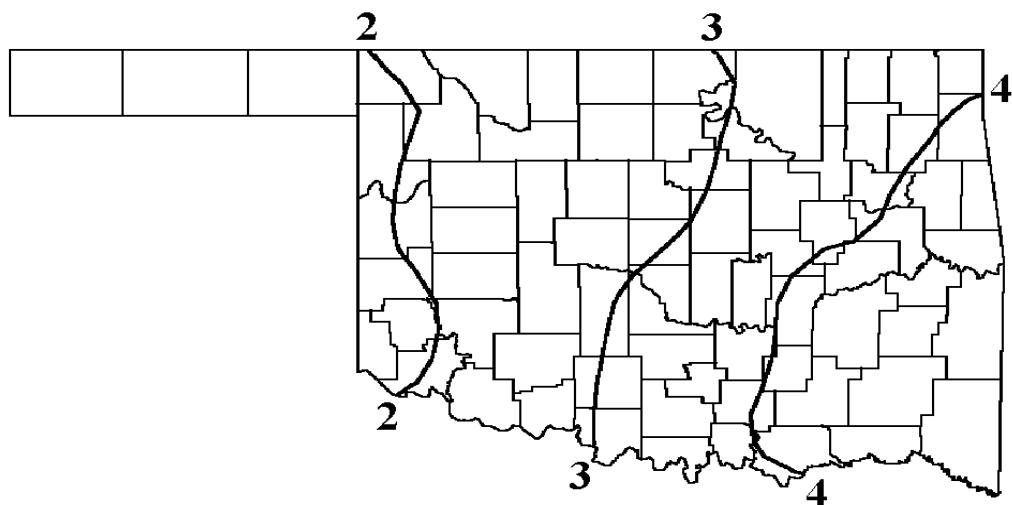
APRIL NORMAL DAILY MAXIMUM TEMPERATURE (°F)



APRIL NORMAL DAILY MINIMUM TEMPERATURE (°F)



APRIL NORMAL MONTHLY PRECIPITATION (INCHES)



APRIL TORNADO STATISTICS

The most tornadoes reported in **APRIL** for Oklahoma was **(40)** in **1957**.

The average number of tornadoes in **APRIL** for Oklahoma is **(10.8)**.

OUTLOOK FOR APRIL 2001 THROUGH JUNE 2001

BASED ON SEASONAL OUTLOOK PROVIDED BY THE CLIMATE PREDICTION CENTER

Temperature: Above normal in southeast part of state
Near normal elsewhere

Precipitation: Near normal statewide

OKLAHOMA CITY CLIMATE CALENDAR

APRIL

The data on this calendar are for Oklahoma City, Oklahoma.
 Normal values are calculated for the period 1961-1990.
 Temperature extremes are for the period 1905-1999.
 Precipitation extremes are for the period 1888-1999.

| Day | Avg. Temp. | Ave. High | 2001 | Record High Year | Low | Ave. 2001 | Highest Min. Year | Low | Record Low Year | Avg. 2001 Precip. | Greatest Precip. | Year |
|--------------|-------------|-------------|------------|------------------|-----------|-------------|-------------------|-----------|-----------------|-------------------|------------------|-------------|
| 1 | 56 | 68 | 92 | 1946 45 | 1938 44 | 68 | 1946 26 | 1899 0.08 | | 2.87 | 1905 | |
| 2 | 56 | 68 | 88 | 1918 43 | 1975 44 | 67 | 1946 20 | 1936 0.08 | | 0.99 | 1922 | |
| 3 | 57 | 68 | 92 | 1893 43 | 1979 45 | 66 | 1934 21 | 1975 0.08 | | 1.37 | 1919 | |
| 4 | 57 | 69 | 93 | 1893 38 | 1920 45 | 68 | 1929 22 | 1891 0.08 | | 2.06 | 1906 | |
| 5 | 57 | 69 | 94 | 1893 43 | 1899 45 | 65 | 1978 26 | 1970 0.08 | | 3.39 | 1953 | |
| 6 | 58 | 69 | 95 | 1893 41 | 1899 46 | 68 | 1967 26 | 1936 0.08 | | 1.24 | 1940 | |
| 7 | 58 | 70 | 94 | 1893 38 | 1938 46 | 68 | 1893 27 | 1938 0.08 | | 1.76 | 1942 | |
| 8 | 58 | 70 | 88 | 1905 36 | 1938 47 | 63 | 1999 28 | 1938 0.08 | | 2.99 | 1922 | |
| 9 | 59 | 70 | 90 | 1930 44 | 1973 47 | 66 | 1927 25 | 1914 0.08 | | 2.91 | 1944 | |
| 10 | 59 | 71 | 91 | 1934 45 | 1958 47 | 66 | 1965 28 | 1973 0.08 | | 1.40 | 1979 | |
| 11 | 59 | 71 | 90 | 1972 47 | 1952 47 | 66 | 1972 29 | 1940 0.08 | | 1.14 | 1997 | |
| 12 | 59 | 71 | 100 | 1972 35 | 1957 48 | 70 | 1972 23 | 1957 0.08 | | 3.11 | 1967 | |
| 13 | 60 | 71 | 94 | 1972 43 | 1957 48 | 65 | 1941 20 | 1957 0.08 | | 3.75 | 1910 | |
| 14 | 60 | 72 | 92 | 1936 46 | 1928 48 | 68 | 1972 27 | 1980 0.08 | | 1.27 | 1947 | |
| 15 | 60 | 72 | 90 | 1940 51 | 1902 49 | 66 | 1982 30 | 1928 0.08 | | 1.67 | 1947 | |
| 16 | 61 | 72 | 92 | 1940 49 | 1905 49 | 67 | 1896 31 | 1921 0.09 | | 1.08 | 1970 | |
| 17 | 61 | 72 | 92 | 1987 47 | 1905 49 | 67 | 1963 30 | 1953 0.09 | | 1.40 | 1908 | |
| 18 | 61 | 73 | 96 | 1925 47 | 1953 50 | 66 | 1964 30 | 1953 0.09 | | 2.97 | 1942 | |
| 19 | 62 | 73 | 94 | 1987 50 | 1918 50 | 68 | 1948 33 | 1953 0.09 | | 2.92 | 1919 | |
| 20 | 62 | 73 | 91 | 1961 43 | 1918 50 | 69 | 1985 33 | 1966 0.09 | | 2.07 | 1937 | |
| 21 | 62 | 74 | 90 | 1965 45 | 1959 51 | 70 | 1961 34 | 1966 0.10 | | 1.39 | 1996 | |
| 22 | 62 | 74 | 95 | 1955 45 | 1909 51 | 69 | 1961 34 | 1959 0.10 | | 1.98 | 1915 | |
| 23 | 63 | 74 | 89 | 1989 52 | 1931 51 | 70 | 1989 33 | 1909 0.10 | | 0.96 | 1945 | |
| 24 | 63 | 74 | 89 | 1901 52 | 1947 52 | 68 | 1989 35 | 1995 0.11 | | 1.67 | 1948 | |
| 25 | 63 | 74 | 91 | 1939 51 | 1997 52 | 66 | 1893 35 | 1910 0.11 | | 3.79 | 1999 | |
| 26 | 63 | 75 | 92 | 1896 50 | 1919 52 | 68 | 1975 35 | 1907 0.11 | | 2.77 | 1998 | |
| 27 | 64 | 75 | 91 | 1959 57 | 1979 52 | 69 | 1970 35 | 1920 0.12 | | 1.57 | 1897 | |
| 28 | 64 | 75 | 93 | 1902 50 | 1922 53 | 70 | 1970 37 | 1979 0.12 | | 1.97 | 1960 | |
| 29 | 64 | 75 | 92 | 1936 50 | 1994 53 | 68 | 1933 34 | 1908 0.12 | | 2.87 | 1974 | |
| 30 | 64 | 75 | 93 | 1948 48 | 1994 53 | 68 | 1936 32 | 1907 0.13 | | 2.13 | 1970 | |
| MONTH | 60.4 | 71.9 | 100 | 1972 | 35 | 1957 | 48.8 | 70 | 1989 | 20 | 1957 | 2.77 |
| | | | | | | | | | | | 3.75 | 1910 |

DATA COURTESY OF NATIONAL WEATHER SERVICE — NORMAN
 Temperatures are in degrees Fahrenheit; precipitation is in inches.

TULSA CLIMATE CALENDAR

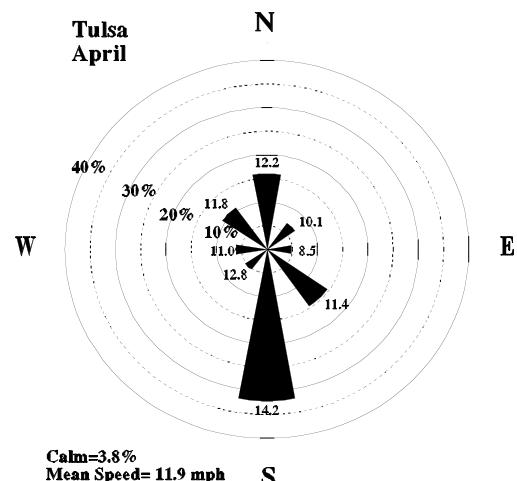
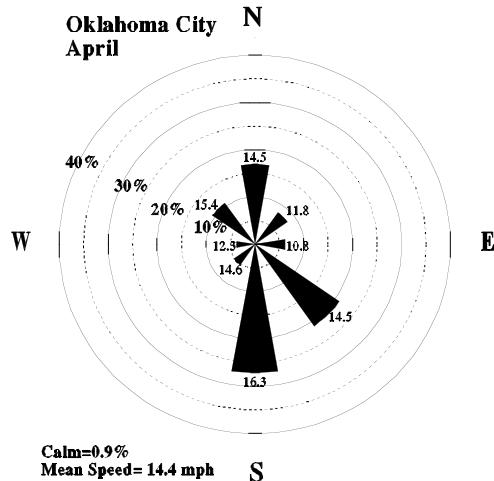
APRIL

The data on this calendar are for Tulsa, Oklahoma.
 Normal values are calculated for the period 1961-1990.
 Temperature extremes are for the period 1905-2000.
 Precipitation extremes are for the period 1888-2000.

| Day | Avg. Temp. | Ave. High | 2001 Record High | Record Low | Year | Lowest Max | Year | Ave. Low | 2001 | Highest Min. | Year | Record Low | Year | Avg. Precip. | 2001 | Greatest Precip. | Year |
|--------------|---------------|--------------|------------------------|---------------|-----------|---------------|-------------|-------------|-----------|-----------------|-----------|---------------|-------------|-----------------|-------------|---------------------|------|
| 1 | 57 | 69 | 94 | 1946 | 44 | 1993 | 45 | | 69 | 1946 | 28 | 1972 | 0.12 | | 1.60 | 1988 | |
| 2 | 57 | 69 | 89 | 1918 | 41 | 1949 | 45 | | 69 | 1946 | 22 | 1936 | 0.11 | | 0.89 | 1916 | |
| 3 | 58 | 69 | 88 | 1965 | 46 | 1979 | 46 | | 69 | 1981 | 23 | 1975 | 0.11 | | 1.25 | 1978 | |
| 4 | 58 | 70 | 90 | 1943 | 46 | 1993 | 46 | | 68 | 1929 | 27 | 1972 | 0.11 | | 4.40 | 1964 | |
| 5 | 58 | 70 | 88 | 2000 | 47 | 1996 | 46 | | 66 | 1929 | 22 | 1920 | 0.11 | | 2.54 | 1933 | |
| 6 | 59 | 70 | 92 | 1960 | 43 | 1939 | 47 | | 67 | 1929 | 29 | 1996 | 0.11 | | 1.40 | 1940 | |
| 7 | 59 | 71 | 88 | 1949 | 46 | 1916 | 47 | | 67 | 1986 | 28 | 1939 | 0.11 | | 1.47 | 1975 | |
| 8 | 59 | 71 | 88 | 1965 | 37 | 1938 | 48 | | 66 | 1999 | 29 | 1938 | 0.11 | | 2.33 | 1913 | |
| 9 | 60 | 71 | 90 | 1930 | 43 | 1973 | 48 | | 64 | 1978 | 24 | 1914 | 0.11 | | 1.78 | 1925 | |
| 10 | 60 | 72 | 92 | 1927 | 47 | 1956 | 48 | | 66 | 1927 | 31 | 1973 | 0.11 | | 2.72 | 1908 | |
| 11 | 60 | 72 | 93 | 1972 | 46 | 1914 | 49 | | 68 | 1972 | 30 | 1940 | 0.11 | | 1.73 | 1901 | |
| 12 | 61 | 72 | 102 | 1972 | 36 | 1957 | 49 | | 68 | 1981 | 26 | 1957 | 0.12 | | 2.88 | 1945 | |
| 13 | 61 | 73 | 96 | 1936 | 45 | 1957 | 49 | | 69 | 1972 | 22 | 1957 | 0.12 | | 1.69 | 1945 | |
| 14 | 61 | 73 | 94 | 1936 | 47 | 1933 | 50 | | 71 | 1936 | 31 | 1957 | 0.12 | | 2.55 | 1929 | |
| 15 | 62 | 73 | 93 | 1936 | 53 | 1993 | 50 | | 68 | 1982 | 27 | 1928 | 0.12 | | 2.51 | 1941 | |
| 16 | 62 | 73 | 93 | 1982 | 49 | 1944 | 50 | | 72 | 1963 | 31 | 1953 | 0.12 | | 1.38 | 1968 | |
| 17 | 62 | 74 | 92 | 1987 | 56 | 1939 | 51 | | 70 | 1963 | 28 | 1921 | 0.12 | | 1.75 | 1953 | |
| 18 | 62 | 74 | 98 | 1925 | 48 | 1953 | 51 | | 70 | 1963 | 29 | 1953 | 0.12 | | 2.61 | 1941 | |
| 19 | 63 | 74 | 94 | 1987 | 45 | 1983 | 51 | | 70 | 1964 | 34 | 1953 | 0.13 | | 2.52 | 1917 | |
| 20 | 63 | 74 | 92 | 1963 | 41 | 1918 | 51 | | 71 | 1964 | 32 | 1953 | 0.13 | | 3.30 | 1929 | |
| 21 | 63 | 75 | 94 | 1965 | 49 | 1931 | 52 | | 71 | 1961 | 32 | 1966 | 0.13 | | 2.54 | 1928 | |
| 22 | 64 | 75 | 91 | 1965 | 49 | 1995 | 52 | | 69 | 1961 | 32 | 1931 | 0.13 | | 1.39 | 1985 | |
| 23 | 64 | 75 | 93 | 1958 | 56 | 1995 | 52 | | 70 | 1925 | 32 | 1909 | 0.13 | | 3.22 | 1953 | |
| 24 | 64 | 75 | 91 | 1975 | 46 | 1910 | 53 | | 71 | 1989 | 37 | 1909 | 0.14 | | 1.67 | 1947 | |
| 25 | 64 | 76 | 89 | 1939 | 49 | 1907 | 53 | | 68 | 1989 | 36 | 1910 | 0.14 | | 2.76 | 1999 | |
| 26 | 64 | 76 | 91 | 1987 | 48 | 1919 | 53 | | 70 | 1975 | 35 | 1910 | 0.14 | | 2.09 | 1915 | |
| 27 | 65 | 76 | 92 | 1966 | 57 | 1998 | 53 | | 70 | 1989 | 36 | 1920 | 0.14 | | 2.33 | 1998 | |
| 28 | 65 | 76 | 88 | 1970 | 53 | 1992 | 54 | | 71 | 1970 | 37 | 1965 | 0.15 | | 3.04 | 1912 | |
| 29 | 65 | 76 | 92 | 1987 | 49 | 1907 | 54 | | 68 | 1942 | 38 | 1969 | 0.15 | | 1.99 | 1994 | |
| 30 | 65 | 76 | 91 | 1987 | 50 | 1907 | 54 | | 71 | 1936 | 35 | 1908 | 0.15 | | 3.00 | 1970 | |
| MONTH | 61.5 | 73 | 102 | 1972 | 36 | 1957 | 49.9 | | 72 | 1963 | 22 | 1957 | 0.12 | | 4.40 | 1964 | |

DATA COURTESY OF NATIONAL WEATHER SERVICE — TULSA
 Temperatures are in degrees Fahrenheit; precipitation is in inches.

APRIL WIND ROSES



April Wind Roses for Oklahoma City and Tulsa. The frequency (percent) of winds from each direction is represented by length of its bar. The numbers at the ends of the bars indicate the average wind speed from that direction in miles per hour.

APRIL SUNRISE/SUNSET TIMES FOR 2001

ALL TIMES ARE CENTRAL STANDARD TIME

| OKLAHOMA CITY | | | TULSA | | |
|---------------|---------|---------|---------|---------|---------|
| DATE | SUNRISE | SUNSET | DATE | SUNRISE | SUNSET |
| 4/1/00 | 6:16 AM | 6:52 PM | 4/1/00 | 6:10 AM | 6:46 PM |
| 4/2/00 | 6:15 AM | 6:53 PM | 4/2/00 | 6:08 AM | 6:47 PM |
| 4/3/00 | 6:14 AM | 6:54 PM | 4/3/00 | 6:07 AM | 6:48 PM |
| 4/4/00 | 6:12 AM | 6:54 PM | 4/4/00 | 6:05 AM | 6:48 PM |
| 4/5/00 | 6:11 AM | 6:55 PM | 4/5/00 | 6:04 AM | 6:49 PM |
| 4/6/00 | 6:09 AM | 6:56 PM | 4/6/00 | 6:03 AM | 6:50 PM |
| 4/7/00 | 6:08 AM | 6:57 PM | 4/7/00 | 6:01 AM | 6:51 PM |
| 4/8/00 | 6:07 AM | 6:58 PM | 4/8/00 | 6:00 AM | 6:52 PM |
| 4/9/00 | 6:05 AM | 6:58 PM | 4/9/00 | 5:58 AM | 6:53 PM |
| 4/10/00 | 6:04 AM | 6:59 PM | 4/10/00 | 5:57 AM | 6:53 PM |
| 4/11/00 | 6:03 AM | 7:00 PM | 4/11/00 | 5:56 AM | 6:54 PM |
| 4/12/00 | 6:01 AM | 7:01 PM | 4/12/00 | 5:54 AM | 6:55 PM |
| 4/13/00 | 6:00 AM | 7:02 PM | 4/13/00 | 5:53 AM | 6:56 PM |
| 4/14/00 | 5:59 AM | 7:02 PM | 4/14/00 | 5:52 AM | 6:57 PM |
| 4/15/00 | 5:57 AM | 7:03 PM | 4/15/00 | 5:50 AM | 6:58 PM |
| 4/16/00 | 5:56 AM | 7:04 PM | 4/16/00 | 5:49 AM | 6:59 PM |
| 4/17/00 | 5:55 AM | 7:05 PM | 4/17/00 | 5:48 AM | 6:59 PM |
| 4/18/00 | 5:54 AM | 7:06 PM | 4/18/00 | 5:46 AM | 7:00 PM |
| 4/19/00 | 5:52 AM | 7:07 PM | 4/19/00 | 5:45 AM | 7:01 PM |
| 4/20/00 | 5:51 AM | 7:07 PM | 4/20/00 | 5:44 AM | 7:02 PM |
| 4/21/00 | 5:50 AM | 7:08 PM | 4/21/00 | 5:43 AM | 7:03 PM |
| 4/22/00 | 5:49 AM | 7:09 PM | 4/22/00 | 5:41 AM | 7:04 PM |
| 4/23/00 | 5:47 AM | 7:10 PM | 4/23/00 | 5:40 AM | 7:04 PM |
| 4/24/00 | 5:46 AM | 7:11 PM | 4/24/00 | 5:39 AM | 7:05 PM |
| 4/25/00 | 5:45 AM | 7:12 PM | 4/25/00 | 5:38 AM | 7:06 PM |
| 4/26/00 | 5:44 AM | 7:12 PM | 4/26/00 | 5:36 AM | 7:07 PM |
| 4/27/00 | 5:43 AM | 7:13 PM | 4/27/00 | 5:35 AM | 7:08 PM |
| 4/28/00 | 5:42 AM | 7:14 PM | 4/28/00 | 5:34 AM | 7:09 PM |
| 4/29/00 | 5:40 AM | 7:15 PM | 4/29/00 | 5:33 AM | 7:10 PM |
| 4/30/00 | 5:39 AM | 7:16 PM | 4/30/00 | 5:32 AM | 7:10 PM |

CONTACT INFORMATION



Oklahoma Climatological Survey

The University of Oklahoma
100 East Boyd Street, Suite 1210
Norman, OK 73019-1012

tel 405-325-2541
fax 405-325-2550

E-mail ocs@ou.edu

Office Hours: 8 AM to 5 PM, Monday-Friday

Mesonet Operators

tel 405-325-3231

E-mail operator@operations.ocs.ou.edu

Visit our web site at <http://www.ocs.ou.edu>.

Content: Howard Johnson
Shaye Palmer

Layout: Stdrovia Blackburn
John Humphrey

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